



THOMAS G. NEWMAN, Editor.

Vol. XXIII. Oct. 19, 1887. No. 42.

Whispering Winds kiss the hills of October:

Thistledown phantoms drift over the lawn;
Red glows the ivy, like ghost-lighted ember,
Shrouded in mist breaks the slow coming dawn;
Sunlighted vistas the woodland discloses,
Sleeping in shadow the still lake reposes,
Gone is the summer, its sweets and its roses—
Harvest is past and the summer is gone.

Plaintively sighing, the brown leaves are falling.
Sadly the wood-dove mourns all the day long;
In the dim starlight the katydids calling.
Hush into slumber the brook and its song.
Gone are the sowers, and ended their weeping,
Gone are the gleaners, and finished the reaping,
Blossom and bee with the song-bird are sleeping—
Harvest is ended and summer is gone.—Sel.

A Book about Bees, is the title of a new apicultural work, by the Rev. F. G. Jenyns, rector of Knebworth, and member of the Committee of the British Bee-Keepers' Association. It is intended mainly for young people, but no one, of whatever age, can peruse its pages without being greatly profited. It treats of the history, habits and instincts of bees, and teaches the fundamental principles of modern bee-keeping. It consists of 200 pages, and is finely illustrated. The author shows himself to be a thorough master of the subject, and the entertaining and instructive manner in which the book is written, will captivate all who read it. It is just such a book as should be in the hands of the young people of every land, from which may be learned those lessons of industry, economy and thrift which are so essential to the fullest measure of success.

How Beeswax is Made by the bees, is described in the following, found in Murray's Magazine:

It is no mere extraneous substance which needs only to be collected for use: it is a bit of individual organic home manufacture. If you examine the under surface of a cell-building worker, you will find beneath the abdomen four pairs of white plates projecting from as many pockets in the incasing rings of this part of the body. These are the wax plates, made from the life blood of the worker. Examine now with a lens one of the hinder legs. You will find that the stoutest joints are very square shouldered at the hinge, and that the hinge is well over to one side, so that the shoulders form a pair of jaws, which open when the limb is bent, and close when it is straightened. The upper jaw has a row of spines which bite on a plate on the lower jaw. With this apparatus, piercing it with these spines, the worker withdraws a wax plate from its pocket, transfers it to the front legs, and thence to the mouth, where it is laboriously masticated with a salivary secretion. Unless it undergoes this process it lacks the ductility requisite for cell-making.

The S. W. Rich Bee Law-Suit was on trial last week in the Delaware County Court in New York. The New York Times gives this account of it:

What is known as the "bee-suit" between Stephen W. Rich, defendant, and John M. Olmstead, plaintiff, both of Hobart, Delaware County, is now being tried in the Delaware County Court. The suit is of general interest to bee-men everywhere. The facts in the case are these: In the spring of 1886 Mr. Olmstead ordered Mr. Rich to move 40 colonies of bees, Mr. Olmstead asserting that the bees were a nuisance. He said if Mr. Rich did not remove them he would make him do so. Mr. Rich has about 300 colonies of bees, 50 in a place. He is a member of the National Bee-Keepers' Union, which is backing Mr. Rich. The suit is before Judge Boardman, of Ithaca. The Judge says he has never had a like suit before. Men interested in bees and honey from several States are in attendance at the trial.

The legal gentlemen who had charge of the case were F. N. Gilbert and J. B. Gleason, of Stamford, for plaintiff, and A. C. Crosby, of Delhi, for defendant. We understand that the witnesses numbered about 40 persons. The damages were set at \$1,200, but the jury, after a brief consultation, awarded him six cents! This virtually declared that they were not a nuisance.

The principal point made by the defense related to the lack of proof of the identity of the trespassing bees as the property of the defendant, rather than of neighboring bee-keepers. The court ruled that the matter of identity was a question of fact to be passed upon by the jury in connection with the question of damages.

The plaintiff asked for \$1,200 damages for injuries inflicted by the bees upon his person and property, but the jury, from which every person having bees was excluded, gave him but six cents to cover wounded feelings and damaged property!!

Another paper says that "the trial, involving questions novel and important to the bee-keeping industry, attracted wide public attention." The result is an overwhelming defeat for the enemies of the pursuit of bee-keeping, and another victory for the National Bee-Keepers' Union.

Uses of Propolis.—A correspondent of the *New England Farmer* writes as follows about propolis:

The word propolis is pure Greek, from *pro*, or in behalf of, and *polis*, a city. It comes to mean a defense, a protection. That is what it is to the bees, a means of defense in winter, and, in fact, at all times. The bees defend themselves with propolis, stopping all openings, making the hive tight, even water-tight with it. During the summer a bottom-board of a hive was pierced in several places by wood-borers, but every place was stopped by propolis. Bees will close with propolis a hole an inch in diameter. When cool weather comes, the bees cannot mould this propolis to their needs; therefore, what is done to keep through the winter should be done before the propolis season closes; the bee-keeper should know before this time comes, that his bees have stores enough for the winter. To break open the brood-nest in November may be fatal to the bees, and it is better not to do it, or have occasion to do it.

The Editor has been "on jury duty" for the past two weeks, and from Monday morning until Saturday noon was "locked up," and not allowed any communication with the outside world. Correspondents and readers will herein find the reason for any apparent dereliction in duty.

Drones.—A correspondent in the *London Journal of Horticulture* argues that the drones are of more value in a hive than many are disposed to think. He says:

Drones are generally described as if they were of a uniform character, and all having the same note in their hum. It is not so. There are as differences in drones as in queens, from the noble and stately looking fellow to the dwarf and almost imperfect insect. Now it is a fact, the more handsome-looking the drone is, the more attractive is his hum. Am I right, therefore, in saying that this is a law in Nature, that the queen from the sound may select the most perfect drone with ease, to the future prosperity of the hive? Are drones of use inside a hive or are they not? The following account of what I found in a few hives lately will answer the question.

A hive weighty with honey, having many drones, but a paucity of bees, had brood in five combs in all stages. Two of these combs were almost totally occupied by drones, and their position was changed daily. Not one of these drones will be killed until young bees are hatched.

The second hive I examined had little honey, few bees, and a moderate number of drones. The queen was newly fertilized, and the bees were already slaughtering the drones.

The third had a paucity of bees, drones, and meat. They also were killing the drones.

The fourth hive was not examined internally, because I observed from the motion of the bees the queen was still a virgin, and likely to be flying soon. The drones of this hive were on the wing, and the bees were tugging at them, which, to the experienced would be taken as an onset upon them; but it is common when the queen is unfertilized, the bees get impatient, and hurry out the drones in the manner indicated.

The interesting part of it was, that as one bee tugged the drone half over the landing board, another flew directly to him and fed him, and then out flew the queen, coming back in less than twenty minutes with signs of fertilization, and the following day was laying. Another queen, however, that was fertilized more than a week since, has not yet laid an egg. The hive is well stocked and stored in everything, and no drones are being killed.

Some five or six years since we stated in these columns that we had reason to think that the drones were of far more value in the hive than they were generally thought to be. The above extract looks the same way. Further investigation may give us more light.

In a Lecture on bee-government by Mr. Wait, of Georgia, at the Vermont State Board of Agriculture, we find the following perhaps rather over-drawn sentiment:

Though bees are not made in God's image, yet many of their habits—neatness, industry, economy and government—may profitably be imitated by men. It has been supposed that their government is an absolute monarchy, but on the contrary, it is a more perfect monarchy than the world has ever seen among men, and the females have their equal share. Mr. Wait here drew an amusing comparison between their government and our own—not only in a political but in a social sense.

The Motto on the cover page of the November number of Frank Leslie's Sunday Magazine—a journal of refined, useful and interesting literature—is well carried out in the November number. "Vesta and the Vestals," by Marc F. Vallette, is very interesting, and the illustrations picture some recent discoveries in Rome. Several good poems and many short articles make up an excellent number of this favorite family magazine.

QUERIES

With Replies thereto.

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The bees have plenty of time to evaporate this honey before cold weather. It is the October-gathered honey which is difficult to ripen.—DADANT & SON.

I think I should leave them their fall-gathered stores, and keep them warm in the winter.—C. C. MILLER.

I think that it will be safe; but quite likely you can extract it and feed syrup at a profit. Honey will be honey this year.—A. J. COOK.

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Connect a pipe with the heating or cooking stove pipe, and the cellar.—G. L. TINKER.

You may possibly get ventilation enough by running a pipe through into a chimney-flue.—J. P. H. BROWN.

It is my opinion that you can ventilate the cellar sufficiently without sub-earth ventilation. A pipe connected with the stove-pipe will ventilate it. If the bees winter well, why ventilate?—W. Z. HUTCHINSON.

Keep the temperature at an even 45°, and you need have no fears regarding the ventilation, according to my experience.—G. M. DOOLITTLE.

Your cellar is all right—let it alone. If you could use a pipe 8 inches in diameter to remove the impure air from the bottom, it would be a help.—H. D. CUTTING.

A hole at the top would give it all the ventilation that I should want. What made you give us the size of your cellar, and then say nothing about the number of colonies you expect to put into it?—JAMES HEDDON.

Sub-earth ventilation is best. I have seen windows on the southeast used to ventilate. I know a very successful bee-keeper who keeps a window open from the bee-cellar all winter; but he fills the space with a screen-box filled with shavings.—A. J. COOK.

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Will the Colonies Winter?

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I do not know.—W. Z. HUTCHINSON.

I fear not. You had better unite them.—J. P. H. BROWN.

I presume so, but if they appear weak in bees, perhaps you had better do some uniting.—C. C. MILLER.

No one can say from this information. Our bees do not do so. We have very little drone-brood in such cases.—A. J. COOK.

An examination should tell you, but from what you say I should judge not. You should have known of this state of affairs in July, and remedied it at that time.—G. M. DOOLITTLE.

I should want to see the colonies before giving any answer. Six frames 10x15 inches would be all right if you had plenty of bees.—H. D. CUTTING.

See answer to Query 479. A strain of bees that is inclined to rear many drones, is also disposed to build much drone-comb. Unless the colonies are very small, they will winter.—G. L. TINKER.

Yes. Put them in a good, warm cellar, or other repository. Why do you not get Mr. Hutchinson's book, and learn how to avoid all that drone-comb?—JAMES HEDDON.

I would have no fears for their safety if the colony is of average size; but I do not know where the brood came from, as you describe it. I guess you will want to put in full sheets of foundation next year; that is, if you have any bees left next spring. Six frames 10x15 inches are not enough for an average colony, if it was all worker-comb. Not less than ten such frames will give sufficient brood, and room for stores for an average colony.—G. W. DEMAREE.

From the data given no one can tell, but I hazard the guess that there will be too few bees to winter safely. There should be at least two quarts of workers now, to go through the winter, and be of value in the spring. I should advise a change of queens.—J. E. POND.

The condition is too indefinitely stated. A change of queens is evidently essential. In a good cellar these colonies might "pull through" the winter.—THE EDITOR.

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Correspondence.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ⊕ north of the center; ⊖ south; ⊙ east; ⊙ west; and this ⊕ northeast; ⊙ northwest; ⊙ southeast; and ⊖ southwest of the center of the State mentioned.

For the American Bee Journal.

Uncapped Nymphs—Observations.

J. F. LATHAM.

When examining the brood-combs, the observant bee-keeper will notice, scattered over their surface, in a comparatively compact mass of capped brood, cells partly filled with honey, others filled with honey but open, and some containing honey, and sealed; while others will contain pollen in greater or less quantities. At the same time the bee-keeper will observe empty cells, cells containing eggs, larvæ in their various stages of development, capped brood and "bare-headed" nymphs, scattered here and there in combs that contain, otherwise, an unbroken mass of pollen and sealed honey.

Upon scrutinizing the combs alluded to above, it will be noticed that the orifices of the cells containing the bare-headed nymphs are slightly contracted, and protrude beyond their surroundings, evincing the appearance of having been left by the nurse-bees for a future finishing touch. The pupæ appear to be cocoonless.

When a cause for the "bare-headed" phenomena is sought, the conditions and immediate surroundings in which they exist, seem to call for some attention. Reasoning from effect to cause, several items present themselves for the exercise of thought as indices by which the investigator may be led to the true source of the *lusus naturæ*; for such it appears to be.

In many of the uncapped cells, alluded to, the larvæ die before reaching the pupæ stage, and are removed by the bees; while others reach the imago stage before vitality becomes extinct, and are removed by the bees also. In some of the cells the remains of the larvæ and pupæ will be found in all grades of decomposition, having the appearance, and emitting the odor of foul brood. When my attention was first drawn to the phenomena of "bare-headed brood," I attributed the cause to a defective development—stunted growth—the result of inefficient nursing, inadequate nourishment, lack of warmth, etc.; behind which, the constitutional stamina of the progenitors were entitled to a due share of consideration. One item in support of a defective development, so far as I have been able to ascertain, appears to exist in the fact before noted, that the bare-headed nymphs are cocoonless. If such is a fact, it presents a very sound basis for the conclusion, that a lack of vitality in the larvæ prevents them from performing a

radical task—that of supplying the swaddling-bands required by nature during the transformation period.

I can recall but a few instances when I have seen many unsealed pupæ in colonies having vigorous queens, when the strength of the colony was properly divided between the duties of the brood-chamber and the supers. During the past season I hived about one-half of a medium-sized swarm on eight all-worker combs, a year old, from which the honey was extracted last fall. At the time for the brood to be capped, I found the four central combs a complete mass, one-half of which, at a fair estimate, was "bare-headed." My first thought, on observing the condition of the colony was, that the old honey adhering to combs after extracting, had generated foul brood; but as I could discern no visible evidence of the disease (other than enough to nurse conjecture), I was satisfied with the theory that the numerical strength of the colony was not adequate to the prolificness of the queen. On examining the colony afterwards, I found but few "bare-headed" nymphs, and at the present time it is among my best.

Although some of the correspondents of the AMERICAN BEE JOURNAL are inclined to infer that a cause for the "bare-headed" phenomena may be attributable to the presence of incipient foul brood, a close observation of its various conditions has not, as yet, convinced me that it is invariably a *vade mecum* of the foul brood disease, although it may, in some instances, be a premonition that the germs of that malady are lurking in the organism of the occupants of the hives or their surroundings. From a short and decisive experience with foul brood, five years ago, I am led to think that the disease, in its round of development, occupies a position in the list of maladies accompanying bee life, of a decidedly specific character; but it may not limit its ravages to any one species of insects.

Next to the diagnosis of the "bare-headed" (!) phenomena, comes the influence of their presence in the combs on the profit-and-loss aspect of the question. If bare-headed nymphs develop vigorous workers, they are harmless; but if a majority of them die before maturing, and the minority survive only to make puny laborers, their presence in the hives must surely result in loss to the apiarist.

Next in order, is the question of prevention or cure. As I am too much of a novice to attempt to dictate a method of correction, I will suggest a prevention only, viz: Keep all colonies vigorous!

Cumberland, 9 Me.

The Pan-Handle Bee-Keepers' Association will hold its next meeting in the K. of P. Hall, No. 1132 Main St., Wheeling, W. Va., on Oct. 26 and 27, 1897. All bee-keepers are cordially invited.

W. L. KINSEY, Sec.

The Wabash County Bee-Keepers' Association will meet in the Court House at Wabash, Ind., on Oct. 26, 1897. A large and interesting program has been arranged, and all bee-keepers are cordially invited.

F. R. COMSTOCK, Sec.

Pacific Rural Press.

Hints about Handling Bees—Stings, etc.

WM. MUTH-RASMUSSEN.

The bee is, as everybody knows, provided with a formidable weapon, formidable in proportion to its size and effect; but this weapon (the sting) is very seldom used, except as a means of defense. The honey-bee is naturally a peace-loving insect, and has no desire to molest anybody as long as it is left to pursue its industrious calling without interference.

While flitting from flower to flower, or sipping the water at the bank of a babbling brook, the bee has no more thought of warfare than the man who peacefully works to provide for his loved ones at home. But let an evil-disposed person try to injure this home or its occupants, or rob it of its hard-earned stores, and the man is immediately on the defense with the best means at his disposal.

Can you blame the bee, the most industrious and intelligent insect, for what you commend in man? Its sagacity and courage are to be admired rather than deplored. Without these qualities the bee and its precious stores would be a prey for numerous enemies, all too fond of insect-food and honey, and but little of the latter would fall to the share of him to whom the Creator gave "dominion over every living thing that moveth upon the earth."

It then devolves upon man to learn the nature and traits of the bees, and to so use this knowledge that he may reap the fruits of their industry without pain or danger to himself, and without unnecessary annoyance or harm to these humble servants.

The time of cruelly submitting a colony of bees to a horrible death over the brimstone-pit, for the purpose of obtaining a scant supply of honey, is past. As well might we kill the sheep to obtain its wool, or the goose for her feathers. By proper precautions there is no more danger in obtaining the honey than the wool and feathers. Certain rules must be observed, to be sure; but by means of these rules the bee-keeper is as safe at his work as a workman in any other occupation.

AVERSIONS OF BEES.

Bees dislike all black, dark or iron-gray colors; fur, hair and wool are an abomination to them. The bee-keeper should, therefore, avoid clothing of such material and colors, when in the apiary. He should also keep his hair and beard covered; and as the eyes and nostrils present dark spots in the face, more liable to attack than the smooth skin. It is generally safest to keep the whole head protected by some kind of a bee-veil. This may be simply a sack of dark-blue mosquito-bar or tarlatan, or it may be a flour-sack with a piece of wire-cloth inserted in front of the face.

The best bee-hat is made by sewing a cylinder of wire-cloth to the rim of a straw or calico hat, and adding a broad strip of cloth to the bottom of

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No one can say from this information. Our bees do not do so. We have very little drone-brood in such cases.—A. J. COOK.

An examination should tell you, but from what you say I should judge not. You should have known of this state of affairs in July, and remedied it at that time.—G. M. DOOLITTLE.

I should want to see the colonies before giving any answer. Six frames 10x15 inches would be all right if you had plenty of bees.—H. D. CUTTING.

See answer to Query 479. A strain of bees that is inclined to rear many drones, is also disposed to build much drone-comb. Unless the colonies are very small, they will winter.—G. L. TINKER.

Yes. Put them in a good, warm cellar, or other repository. Why do you not get Mr. Hutchinson's book, and learn how to avoid all that drone-comb?—JAMES HEDDON.

I would have no fears for their safety if the colony is of average size; but I do not know where the brood came from, as you describe it. I guess you will want to put in full sheets of foundation next year; that is, if you have any bees left next spring. Six frames 10x15 inches are not enough for an average colony, if it was all worker-comb. Not less than ten such frames will give sufficient brood, and room for stores for an average colony.—G. W. DEMAREE.

From the data given no one can tell, but I hazard the guess that there will be too few bees to winter safely. There should be at least two quarts of workers now, to go through the winter, and be of value in the spring. I should advise a change of queens.—J. E. POND.

The condition is too indefinitely stated. A change of queens is evidently essential. In a good cellar these colonies might "pull through" the winter.—THE EDITOR.

Should any Subscriber receive this paper any longer than it is desired, or is willing to pay for it, please send us a postal card asking to have it stopped. Be sure to write your name and address plainly. LOOK AT YOUR WRAPPER LABEL.

Correspondence.

This mark ⊙ indicates that the apiarist is located near the center of the state named; ⊙ north of the center; ⊙ south; ⊙ east; ⊙ west; and this ⊙ northeast; ⊙ northwest; ⊙ southeast; and ⊙ southwest of the center of the State mentioned.

For the American Bee Journal.

Uncapped Nymphs—Observations.

J. F. LATHAM.

When examining the brood-combs, the observant bee-keeper will notice, scattered over their surface, in a comparatively compact mass of capped brood, cells partly filled with honey, others filled with honey but open, and some containing honey, and sealed; while others will contain pollen in greater or less quantities. At the same time the bee-keeper will observe empty cells, cells containing eggs, larvae in their various stages of development, capped brood and "bare-headed" nymphs, scattered here and there in combs that contain, otherwise, an unbroken mass of pollen and sealed honey.

Upon scrutinizing the combs alluded to above, it will be noticed that the orifices of the cells containing the bare-headed nymphs are slightly contracted, and protrude beyond their surroundings, evincing the appearance of having been left by the nurse-bees for a future finishing touch. The pupae appear to be cocoonless.

When a cause for the "bare-headed" phenomena is sought, the conditions and immediate surroundings in which they exist, seem to call for some attention. Reasoning from effect to cause, several items present themselves for the exercise of thought as indices by which the investigator may be led to the true source of the *lusus naturae*; for such it appears to be.

In many of the uncapped cells, alluded to, the larvae die before reaching the pupae stage, and are removed by the bees; while others reach the imago stage before vitality becomes extinct, and are removed by the bees also. In some of the cells the remains of the larvae and pupae will be found in all grades of decomposition, having the appearance, and emitting the odor of foul brood. When my attention was first drawn to the phenomena of "bare-headed brood," I attributed the cause to a defective development—stunted growth—the result of inefficient nursing, inadequate nourishment, lack of warmth, etc.; behind which, the constitutional stamina of the progenitors were entitled to a due share of consideration. One item in support of a defective development, so far as I have been able to ascertain, appears to exist in the fact before noted, that the bare-headed nymphs are cocoonless. If such is a fact, it presents a very sound basis for the conclusion, that a lack of vitality in the larvae prevents them from performing a

radical task—that of supplying the swaddling-bands required by nature during the transformation period.

I can recall but a few instances when I have seen many unsealed pupae in colonies having vigorous queens, when the strength of the colony was properly divided between the duties of the brood-chamber and the supers. During the past season I hived about one-half of a medium-sized swarm on eight all-worker combs, a year old, from which the honey was extracted last fall. At the time for the brood to be capped, I found the four central combs a complete mass, one-half of which, at a fair estimate, was "bare-headed." My first thought, on observing the condition of the colony was, that the old honey adhering to combs after extracting, had generated foul brood; but as I could discern no visible evidence of the disease (other than enough to nurse conjecture), I was satisfied with the theory that the numerical strength of the colony was not adequate to the prolificness of the queen. On examining the colony afterwards, I found but few "bare-headed" nymphs, and at the present time it is among my best.

Although some of the correspondents of the AMERICAN BEE JOURNAL are inclined to infer that a cause for the "bare-headed" phenomena may be attributable to the presence of incipient foul brood, a close observation of its various conditions has not, as yet, convinced me that it is invariably a *vade mecum* of the foul brood disease, although it may, in some instances, be a premonition that the germs of that malady are lurking in the organism of the occupants of the hives or their surroundings. From a short and decisive experience with foul brood, five years ago, I am led to think that the disease, in its round of development, occupies a position in the list of maladies accompanying bee life, of a decidedly specific character; but it may not limit its ravages to any one species of insects.

Next to the diagnosis of the "bare-headed" (!) phenomena, comes the influence of their presence in the combs on the profit-and-loss aspect of the question. If bare-headed nymphs develop vigorous workers, they are harmless; but if a majority of them die before maturing, and the minority survive only to make puny laborers, their presence in the hives must surely result in loss to the apiarist.

Next in order, is the question of prevention or cure. As I am too much of a novice to attempt to dictate a method of correction, I will suggest a prevention only, viz: Keep all colonies vigorous!

Cumberland, 9 Me.

The Pan-Handle Bee-Keepers' Association will hold its next meeting in the K. of P. Hall, No. 1138 Main St., Wheeling, W. Va., on Oct. 26 and 27, 1887. All bee-keepers are cordially invited.

W. L. KINSEY, Sec.

The Wabash County Bee-Keepers' Association will meet in the Court House at Wabash, Ind., on Oct. 28, 1887. A large and interesting program has been arranged, and all bee-keepers are cordially invited.

F. S. COMSTOCK, Sec.

Pacific Rural Press.

Hints about Handling Bees—Stings, etc.

WM. MUTH-RASMUSSEN.

The bee is, as everybody knows, provided with a formidable weapon, formidable in proportion to its size and effect; but this weapon (the sting) is very seldom used, except as a means of defense. The honey-bee is naturally a peace-loving insect, and has no desire to molest anybody as long as it is left to pursue its industrious calling without interference.

While flitting from flower to flower, or sipping the water at the bank of a babbling brook, the bee has no more thought of warfare than the man who peacefully works to provide for his loved ones at home. But let an evil-disposed person try to injure this home or its occupants, or rob it of its hard-earned stores, and the man is immediately on the defense with the best means at his disposal.

Can you blame the bee, the most industrious and intelligent insect, for what you commend in man? Its sagacity and courage are to be admired rather than deplored. Without these qualities the bee and its precious stores would be a prey for numerous enemies, all too fond of insect-food and honey, and but little of the latter would fall to the share of him to whom the Creator gave "dominion over every living thing that moveth upon the earth."

It then devolves upon man to learn the nature and traits of the bees, and to so use this knowledge that he may reap the fruits of their industry without pain or danger to himself, and without unnecessary annoyance or harm to these humble servants.

The time of cruelly submitting a colony of bees to a horrible death over the brimstone-pit, for the purpose of obtaining a scant supply of honey, is past. As well might we kill the sheep to obtain its wool, or the goose for her feathers. By proper precautions there is no more danger in obtaining the honey than the wool and feathers. Certain rules must be observed, to be sure; but by means of these rules the bee-keeper is as safe at his work as a workman in any other occupation.

AVERSIONS OF BEES.

Bees dislike all black, dark or iron-gray colors; fur, hair and wool are an abomination to them. The bee-keeper should, therefore, avoid clothing of such material and colors, when in the apiary. He should also keep his hair and beard covered; and as the eyes and nostrils present dark spots in the face, more liable to attack than the smooth skin, it is generally safest to keep the whole head protected by some kind of a bee-veil. This may be simply a sack of dark-blue mosquito-bar or tarlatan, or it may be a flour-sack with a piece of wire-cloth inserted in front of the face.

The best bee-hat is made by sewing a cylinder of wire-cloth to the rim of a straw or calico hat, and adding a broad strip of cloth to the bottom of

the cylinder. The cloth falls over the shoulders, or may be tucked under the coat-collar. The hands should never be protected. Any kind of glove which may be worn will be more objectionable to the bees than the bare hands. If the bees are particularly irascible, singe the hair off the back of the hands and dip them frequently in cold water.

Quick motions and sudden jars to the hive should be avoided. Hives should, therefore, never be opened in cold weather, when the propolis, with which the cover and frames are fastened, is hard, and when everything comes apart with a snap. The breath of some persons is objectionable to the bees; but in hunting for a queen on the comb, I frequently blow hard on the bees to make them disperse and move around, and I find that such a blow of cool air is less objectionable and less irritating to them than smoke.

FRIGHT OF BEES.

Bees have a natural fear of smoke. Taking advantage of this trait, smoke is the principal weapon in the hands of man with which to control, subdue or direct the bees. By judicious use of smoke the bees may be made to move in any direction desired, as they will always retreat from it.

A roll of cotton rags of the size and shape of bologna sausage makes a very good smoker. The rags should be rolled as hard as possible to prevent blazing, and tied every two inches. The bellows-smoker, now so commonly used by bee-keepers, is, however, a far superior implement, as it will burn anything that will burn in a stove, and avoids danger of fire, which is often caused by the cotton roll.

MANIPULATING COMBS.

In the manipulation of combs great care should be used not to pinch or crush any bees, as the odor of poison extruded by such is exceedingly irritating to the other bees in the hive, or to those flying about. If a bee is crushed or stings the hand, a few puffs of smoke on the spot will generally neutralize and conceal the odor of the poison.

When it is necessary to remove the bees from a comb, the best way is to shake them off, holding the frame so securely that it will not slip out of the fingers. As, however, some bees will hold on with the tenacity of a kitten, they must be brushed off. For this purpose nothing is better than a single, large eagle feather. This should be frequently dipped in water to keep it soft and pliable. A wing or brush is not desirable, as the bees may get entangled in the feathers, hair or fibers, which is very exasperating to them.

If a comb contains queen-cells, which it is desirable to save, such a comb must, however, not be shaken, as the sudden motion is liable to injure the embryo queen. The bees must then all be brushed off, and to dampen their possible ire at this proceeding, it is advisable to sprinkle them slightly, and frequently dip the

feather in water. This prevents them from taking wing immediately, and getting the impression that a shower is coming up, they are more desirous of taking care of themselves than of attacking their owner.

Independence, O. Calif.

For the American Bee Journal.

A Full Colony of B's.

S. M'LEES.

As I have noticed the "Swarm of Be's" on page 438, and do not think it more than a nucleus, I send to the AMERICAN BEE JOURNAL what I consider a "full colony," selected from my old scrap-book.

May, O. Mich., Sept. 1, 1887.

[The "full colony" referred to in the above, is as follows:—Ed.]

B-think ere you stumble, for what may B-fall,
B truthful, B self, and B faithful to all;
B watchful, B ready, B open, B frank,
B manly to all men, what ere B their rank.

B calm, B retiring, B ne'er led astray,
B grateful, B cautious of those who B-tray.
B careful, but yet B sure to B-tow;
B temperate, B steadfast, to anger B slow.

B earnest, B truthful, B firm and B fair,
B meek, and of all mis-B-haviour B-ware.
B pleasant, B patient, B fervent to all,
B best if you can; but B humble withal.

B just and B generous, B honest, B wise,
B mindful of time, and B certain it flies.
B hopeful, B cheerful, B happy, B kind,
B busy of body, B modest of mind.

B brave, and B-ware of the sins that B-set,
B sure that no sin shall another B-get.
B prudent, B liberal; of order B fond,
Buy less than you need, B-fore buying B-yond.

B prompt and B dutiful, still B polite,
B reverent, B quiet, B sure and B right.
B thoughtful, B thankful, what ere may B-tide;
B trustful, B joyful, B clean, B side.
B tender, B loving, B good and B-nign,
B-loved shalt thou B, and all else B thine.

Gleanings.

Bee-Keeping with other Pursuits.

DR. C. C. MILLER.

Should bee-keeping be made an exclusive business, or should it be pursued in conjunction with some other business? This question can be best answered after considering some of the pursuits that may be combined with bee-keeping. I am competent to speak of only a few; and if it seems really desirable that there shall be a combination, perhaps others may be called out. Perhaps I may arouse Mr. G. M. Doolittle by saying that I think he has made one of the worst combinations possible in combining bee-keeping with small-fruit raising. I think there is a somewhat general impression that bee-keeping and raising small fruits go nicely together. There is this much to say in favor of it—that the man with the right taste for bee-keeping is apt to have the right taste for a fruit-raiser; and if successful at either he would be successful at the other if he should turn his attention to it.

But a business to be combined with bee-keeping should be one that would require the attention of the bee-keeper mainly at a time when his bees require no care. So far as my experience goes, the small-fruit business

requires the closest attention at the very time the bees demand it. As soon as spring has fairly opened, there is work to be done at the bees, and so there is at strawberries, raspberries, etc. As the season advances, the bees become more imperative in their demands, and so do the berries. In the height of the picking season, when the eyes of the fruit-raiser must be everywhere to see that pickers are making good work, to settle disputes, to make sure that berries are promptly sent to their proper destination, and not allowed to lie over and spoil—at this time, when the fruit-raiser, unless possessed of a very cool head, is about half crazy, the bees alone are enough to make him go distracted when a dozen swarms may come out at a time. In a word, the busy time for each comes at the same time; and what is wanted is something to occupy the leisure time of the bee-keeper.

Teaching school, I think, comes nearer to it; for the busy time with bees comes in the summer vacation; and one with sufficient strength and the right taste might take care of quite a number of colonies without interfering with school duties. I think, however, he would in time decide as I did, to give up one or the other. A notable exception, however, is in the case of Mr. E. A. Gastman, of Decatur, Ills., who has been for many years superintendent of schools, if I am not mistaken, and at the same time a bee-keeper. Mr. Gastman, however, is a man of magnificent physique—by the way, it just occurs to me that he is very much the build of G. M. Doolittle—and looks as if he might easily do the work of two ordinary men.

Of course, there may be many special departments in which different individuals may have developed special taste and ability, where a somewhat successful combination might be made. For instance, the teacher of the old-fashioned singing-school (now unfortunately out of vogue) could take care of bees without interfering with his "schools," held only on the long evenings.

But what we are after is something that may be done by almost any one with the requisite qualifications to be a good bee-keeper. I think I have heard poultry-keeping spoken of in connection with bee-keeping. That, again, comes too much like berry-raising. When work begins to press with the bees, old Biddy will be wanting to sit, and perhaps two or three hens will be sitting on one nest, persistently changing from where you want them, till you feel like shutting your teeth together hard, and saying, "What does make you act so, when I haven't time to fuss with you? I should just like to wring your necks for you." Yet after all this is said, there remains the fact that, in at least two instances, periodicals have been published having for their specialties bee-keeping and poultry-raising. Why this, unless the two pursuits were supposed to have some special adaptation to each other?

To tell the truth, if a young man to-day were to write me, "I have at

least ordinary ability as a bee-keeper, and have decided that I must have some other pursuit to connect with bee-keeping, what shall it be?" with my present knowledge I should reply, "Keep poultry." But I would not have any hens sitting in swarming time, nor, indeed, with flocks of little chicks wandering about, trying to lose themselves in the wet grass. I have studied some little about it, and taken some observations; and I think the whole business of poultry-raising might be done almost entirely when bees require little attention.

Mind you, I do not say it is best to combine at all; but if combining is done, the merits of poultry-keeping deserve consideration.

Marengo, 3 Ills.

For the American Bee Journal.

The Fecundation of Queens.

ARAD C. BALCH.

On page 567 is an article by Mr. N. W. McLain, on the fecundation of queens, which I have read with a great deal of interest, as he is the first man I have heard of that has sustained me in the discovery which I made 15 or 20 years ago, and have practiced more or less ever since. I have practiced principally on queens that had defective wings, and could never fly to meet the drones on the wing. I have given the manner of working, several times, in the Michigan State Bee-Keepers' conventions.

I have always found more trouble with drones than queens. I avoid that in a measure by catching drones as they come back to the hive after having their flight. I insert the sex organ of the male into the queen between the first and second rings of the abdomen on the underside of the queen. It is done in my fingers by forcing the queen's abdomen back, by pressing on it with the drone until the rings open, and then by pressing the drone, his sex organ will come out, and if held properly, the work is done. The queen will frequently draw the dead drone (if at once put on a comb) all over it, until some worker pulls it away.

If by any chance I do not succeed with the first drone, I do not try again that day; for if I use two drones, unless I cage the queen, they are almost sure to ball and kill her. Query: Is not one reason why so many queens are lost on their wedding trip, because a queen has met more than one drone?

I should think, from Mr. Otis N. Baldwin's description, that he holds them the same as I have done, but I am not sure. I succeeded in fertilizing my first queen after she had met the drones, that had hatched by the hundreds; it was at a time when Rev. L. L. Langstroth was selling queens at \$10 each, and was one reared from a queen bought of him. I mated her with a pure Italian drone, and her bees were pure, which was a rare thing at first, as there were so many blacks in the country, and few Italians. Kalamazoo, 9 Mich

Country Gentleman.

A Plea for Wide Frames.

GEO. A. STOCKWELL.

A light harvest demonstrates the value or convenience of the wide frame for surplus honey. In a good season the bees may fill every box in the 24 or 28 box crate. They may fill more than one, and the crates, thus filled, may be sent to market undisturbed. This is the theory of it, and a special crate is made for the purpose. But the practice is different. In sending honey to market the bee-keeper aims to make an attractive package, if he wishes to sell twice in the same place. Therefore, he will not send a crate of honey to market without first removing some of the propolis, for several reasons, viz: First, the consumer of honey, or buyer, knows nothing about propolis, and may think that it is in the honey as well as in the crate; second, the boxes covered with propolis in warm weather cannot be handled without soiling the hands, and any bee-keeper knows that "several washings" are required to remove it; and, third, honey thus sent is uncleanly in appearance.

TIERING UP.

No honey ought to be sent to market in crates used on the hives, and probably very little is so sent. Another reason for using crates is that they can be tiered up. Opinions differ as to tiering up. The advanced bee-keeper takes off the honey as soon as capped, or as soon as all or nearly all the sections in the case are capped, and does not leave "completed" honey to serve as a door-mat or a highway to an upper crate. It will become soiled.

Honey should be taken from the hive as soon after it is capped as possible. At all events, no bee-keeper wishes his honey mixed. He cannot prevent the mingling of different kinds to a certain extent, but he may have the early honey, unmixed with midsummer honey, and the latter free from fall honey.

If honey is left in the hive, some sections will have dark honey on one side and light on the other. A section taken from a hive about Aug. 1, had on one side half of the honey dark, almost black (probably chestnut honey), and the rest of that side white. Certainly, we do not want apple-bloom or raspberry honey mixed with chestnut or buckwheat honey. Therefore, honey should be removed three times in a season, if not oftener.

UTILITY OF WIDE FRAMES.

The utility of the wide frames is shown here. Suppose on the first of August it is desired to remove the surplus honey of a hive. There are eight sections in the centre capped and ready for market, and as many more are uncapped, or partly capped. The crate itself is glued fast, whatever the arrangement may be. Of course it can be removed, but it were better not to disturb it. If the crate

should be removed, it must be taken into a room, for one cannot work long over a crate of honey in the open apiary. If we do, there will be no honey left for the bee-keeper.

The section boxes, also, are held fast by propolis, and it is almost impossible to remove the sections as quickly as the case demands, without breaking one of them, or an adjoining section. If, however, the wide frames are used, holding either four or eight boxes, each frame may be pried off in an instant, the bees shaken off, the completed sections pushed out, and fresh boxes inserted. The uncapped, or partly capped sections, are brought together over the centre of the hive, and the new boxes placed outside of them.

Another advantage is that only one frame is exposed at a time. After one is taken out, cover the hive with the usual cover, if convenient to handle, or have a sheet ready to draw over the hive when the frame is taken out.

There are many unfilled crates this season, and many with no more in them than when put on. Everywhere the crop is light, and the bees appear to have so little to do that they can give their whole attention to assisting the bee-keeper in removing a little honey. In an apiary of 20 colonies, and in one of 12, it has been almost impossible to open a hive without starting a bee-fight, and bee-and-man fight, for they fall upon the operator without mercy.

Providence, 3 R. I.

For the American Bee Journal

The Season in Central Illinois.

GEO. F. ROBBINS.

Fourteen days ago a week of rain commenced, which may, perhaps, be said to have ended our long drouth, which, in this immediate region, has lasted since June 10, and in some parts near here, a great deal longer than that. Grass, which has been dried up since early in July, is now growing nicely. But a frost a few days before the rains commenced, nipped the honey-plants, so that bees have not gathered anything for over two weeks.

We had about ten days of good honey-weather in the first half of June, with perhaps ten days more during which bees gathered any surplus at all. I took off about 725 pounds of comb honey, and extracted some 375 pounds—just one-fourth of a fair crop from 56 colonies of bees, less than 50 of them good ones. My bees managed to live and breed through the summer.

Usually the stubble fields grow considerable crops of heart's-ease, but that source of honey was this year a total failure. Goldenrod, asters and Spanish-needle were numerous, but yielded very little. I have never yet had so little honey in my hives at the close of the season as now. Yet with what they have of clover honey in their combs, and what they gathered from late flowers (which I am work-

ing to get into about six combs each), I expect to keep them until April. I had but few swarms, and only increased my apiary to 66 colonies, which I have reduced so far to 58.

There is no honey in Springfield, except a little that I took there some time ago. Some producers whom I know, rushed their honey in last July, selling it at 10 cents per pound. I expect to reserve mine for my home trade. The prospect is that I shall easily dispose of it all within a few miles of home at higher rates than last year. Very few around here obtained any surplus at all.

Mechanicsburg, © Ills., Oct. 10, 1887.

Read at the Ga. Agricultural Convention.

The Developments of Bee-Keeping.

COL. J. B. MITCHELL.

From the earliest ages of the world bees have been invested with peculiar interest, and have claimed the attention, not only of the unlearned and ignorant, but of the student and naturalist as well. The mystery which so long enveloped them and their habits added not a little to the zest with which their history was investigated. The discoveries of the last thirty years, however, have so elucidated the laws of bee-insect, that no important point is any longer a subject of controversy or mystery; and in the light now thrown upon the subject, no branch of moral economy can be more definitely regulated or conducted with such absolute certainty of success.

The management of bees can only be successful when conducted with a perfect understanding of their natural history, and in accordance with the instincts that govern them. In the words of an eminent writer on this subject, the business may be viewed as a science, having for its object the attainment of a correct knowledge of all that pertains to the life, habits and instincts of the busy bee, and as a practical art, which regards all the attainments thus made, and to be made, as the only reliable foundation of successful management.

Bees in themselves have the same essential habits that were given to them when they first winged their flight in the Garden of Eden, as permanent and unvarying as the attraction of gravitation, or the natural laws of our solar system. They act alike under like circumstances; are incapable of education, and learn nothing. It is by taking advantage of their unchangeable habits that we can control their actions and make them subservient to our own good pleasure, just as we take advantage of the immutable laws of the universe and appropriate them to our own conveniences. The laws which govern these wonderful little insects are peculiar to themselves, different from those which govern everything else. They are simple, and one can manage them in almost any way he chooses, so long as he does not go contrary to their instincts, but they are fixed and

immutable, and when we deviate from them in the smallest degree, we may expect failure, either partial or total, to be the result. To be successful, then, in the practical art, the science upon which it is founded must be thoroughly understood.

All these laws are fully and clearly explained in various able works on the subject which have been published and are now accessible to all who desire to acquire a knowledge of them. It is not my purpose or intention to speak of them further than is necessary to give a general idea of what has been accomplished in climates less favorable to success than ours, and leave you to judge, if such results can be obtained in the bleak and inhospitable regions of the North, what might be done, or rather what might not be done, among our rich plants, under our sunny skies, by a system of intelligent bee-culture.

Notwithstanding the attention that bee-culture has always received, and the efforts that, from time to time, have been made to perfect some invention to assist the owner in obtaining the greatest amount of surplus honey in the best form, and with the least injury to the bees, and to also give him the control of the interior of the hive, so as to enable him, at any time, to tell if anything was wrong, and apply the remedy, it was not until the present century that such a thing was actually accomplished.

Between the years 1834 and 1845 several persons in Europe and in this country invented hives in which the combs were to be built, each on a separate bar or frame, which could be readily taken out and replaced at pleasure, and without injury to the combs, and thus a new era in bee-keeping was commenced.

There is nothing in these hives which is intended to perform the labor of the bees or their keeper. They are simply aids to the work. The great advantage they possess is the command they give of every comb, placing it in your power to know exactly the condition of your bees.

There is much difference of opinion among bee-keepers as to which is the best hive, and without pretending to say what may or may not be accomplished with other hives, it is now a matter of history that the Langstroth hive has given the best results that have ever been obtained by any hive in the world.

It is not positively certain whether bees were found in this country at the time it was first visited by Europeans or not. It is thought by some that they were, while others contend that they were not, but were imported by some of the first settlers from England. In support of this proposition we hear of a tradition among the Indians, that the appearance of honeybees, which they called "the white man's fly," was a sure indication of the white man's coming to take possession of the land. In the investigation of this subject, which is of no great importance at this time, I have seen bees in the same locality so entirely different as to create an impres-

sion that there were at least two distinct races of the so-called black bees, and that possibly some were natives of this country, while the others were imported.

As soon as the practicability of the movable-comb hive became a certain fact, new interest was awakened in bee-culture. Hundreds were induced to commence the business that would never have done so under the old system. A new and much better system of management has been developed, larger quantities of honey have been obtained, which, going to market in better shape, has increased the demand and made a better market. A few years ago honey could only be sold in small quantities or by the hundred weight, but now it is sold by the barrel, hoghead or ton. The Agricultural Department at Washington no longer considers bee-keeping a business of no importance, but its agents all over the country now include in their reports the results of bee-keeping the same as that of other agricultural pursuits. The present production of honey in this country is estimated at about one hundred millions of pounds per annum, representing a value of about fifteen millions of dollars.

In the year 1879 two enterprising apiarists started for the Old World in quest of new species of bees, with the hope that they might discover and introduce into America some that were of more value than any we then had. After visiting the principal apiaries of Europe, they located on the island of Cyprus, where they established a large apiary in the city of Larnaca. On the island they found the Cyprian bees, a pure and distinct race, which had been isolated from all other races by confinement to that island for perhaps thousands of years. They also obtained a new variety known now as Holy-Land or Syrian bees. Some of them they got from Jerusalem, and other places in Judea; some from Jaffa, some from east of the Jordan and Dead sea, some from Damascus, and some from Mount Lebanon and other places. In the month of June, 1880, one of the apiarists returned to America, bringing a large number of the queens of these two races of bees with him, and since that time thousands of them have found their way to this country.

The Cyprians are described as bearing a close resemblance to the Italians, but having a reddish golden shield running across the back between the wings, and the under side of the abdomen being of a light golden color, which becomes darker towards the extremity. It is claimed that as honey-gatherers they are superior to any other race, but their stores are protected with so much determination that few who have encountered them once are very ready to do so the second time. I have seen but 2 colonies of them, and though I am regarded by some as an enthusiast in bee-culture, I do not hesitate to say that, if all bees were like the Cyprians, I should give up the business.

The Syrians also bear a close resemblance to Italians, but are de-

scribed as being a little brighter, and perhaps a trifle smaller. They are said to be excellent honey-gatherers, and are even more sure to repel robbers than Italians, but are more irritable, and, worst of all, when once aroused, are totally indifferent to smoke, and fight undismayed to the last. Both of these races have admirers, who prefer them to the more gentle and amiable Italians, but so far as my information extends, they are as yet in a hopeless minority.

Another new race introduced several years ago, from Carniola, near the Adriatic sea, is now attracting considerable attention in this country. They are described as being much like our common bees in appearance, more gentle than Italians, and good workers, but as they increase rapidly, it is said that they do not lay up as much surplus as some others. What the ultimate verdict of the public will be in regard to their value remains to be seen.

Hawkinsville, Ga.

Western Agriculturist.

How to Secure Straight Combs.

C. P. DADANT.

This is the basis of successful bee-culture, for it is impossible to handle the bees, unless the combs are hanging perfectly straight in the frames, so as to be easily taken out separately.

The plan formerly in use, and indicated by Langstroth, was a bevel on the lower side of the top-bar. This bevel, made in the shape of a V, was sometimes made very small, and usually succeeded tolerably. Yet it happened very often that the bees would join the comb of one frame to that of another, and when they were full of honey, it was impossible to separate them without cutting the comb and causing a great deal of honey to run out, drowning bees and sometimes attracting robbers.

The invention of comb foundation has finally and forever put an end to crooked combs, wherever it is used. Comb foundation forces them to build combs which hang in the frames "as straight as a board." Indeed, it has even one advantage over natural comb, it is more regular. This was said very truly by one of our leading bee-keepers at an Eastern convention.

There are, however, some attentions necessary in order to deprive the full benefit of the comb foundation in obtaining straight combs. For instance, the hives should be perfectly level from side to side, so that the foundation will not hang out of the frame, but will remain perpendicular in it until the bees have it finished and well fastened to the sides. It should also be well fastened to the centre of the top-bar. This is done by pressing the edge of it down on the under side of the bar with a knife, while the wax is warm enough to be quite pliable.

When foundation is given to a strong natural swarm, it should be given sparingly, not more than 2 or 3 inches deep in each frame, for if a full sheet be given, the large numbers

of bees that will cluster on it will cause it to sag. Full sheets can be given safely to colonies which have been divided, or even to full colonies in early spring before they have attained full strength.

But in order to secure straight combs, it is not absolutely necessary to give more than a small strip of foundation on each frame running along the full length of the frame. With such strips on each frame, and hives set perpendicular from side to side, straight combs will be secured every time. It is, however, advisable to set the hive somewhat slanting forward. This will cause the water from rain or moisture to run out of the hive, and will not prevent the combs from keeping perpendicular, since the slope will be in the length of the frames, and not across them.

Hamilton, C. Ills.

For the American Bee Journal.

My Experience with Tin-T Cases.

JAMES HEDDON.

Much has been written of late concerning this style of surplus case. As I have used tin-T cases for four or five years, to a greater or less extent, and along side of my old, non-reversible case, as well as my new reversible, wide frame case, and others, I would be pleased to give my opinions, formed during this experience. This year I had in use about equal parts of the three styles of cases above mentioned; or, perhaps, I may more correctly say, a majority of the tin-T cases.

When I do not wish to use any separators, my old-style case, now pretty well known as the "Heddon case," (which is so much used and prized by many leading apiarists both in this and other countries,) I find vastly superior to any and all others. When I come to the use of separators, then I prefer my new reversible wide-frame case to any and all others, for every reason except cost. In point of expense, the tin-T case is preferable where separators are to be used.

It was some five or six years ago that Mr. Vandervort, of foundation-mill fame, first described to me his excellent process of making the tin-T's in a most perfect manner; I do not know who is the prior maker and user of the tin-T cases, but at that time Mr. Vandervort had used them for some years.

I prefer my present style of wide cases with tin separators, to T cases, not because I wish to invert it, but because I can invert each longitudinal row of sections in each wide frame separately, or jump the outside rows of sections to the centre, at will. I have found very little, if any, advantage in having a surplus case reversible.

The past two years' experience has taught me the impracticability of inverting the entire surplus case at once. I cannot better give the reasons than to quote a few sentences from my former writings. With re-

gard to inverting the surplus sections, I said:

"If the combs are not sufficiently developed, to be properly attached to the sides of the sections, they will fall over, making a bad mess. On the other hand, if they are pretty nearly all capped over, and then reversed, they will either be finished without being attached at the top at all, or else, what is oftener the case, be ridged and made to look bungling as they are attached to the bottom-piece, now at the top of the case. They are also not so white and beautiful as those not so reversed. There is, however, a short period in the development of these little surplus combs in which inverting results in all the advantages ever claimed for it; but as it is a fact that the combs of a whole case are rarely all at this stage of development at one time, I am unanimously in favor of inverting them by wide frames. I find the development in all four sections in any one wide frame, usually to be almost universally the same, which makes this system practical, and at the same time I perform this operation I am also "jumping" the outside frames to the centre (as Mr. Manum terms it) wherever I find variance in their completion. I find that variance in the completion of sections, exists from side to side, and not from end to end, of the cases; which is one fact that warrants preference for wide frames."

To conclude, I will say that whoever can afford it, will do well to adopt the wide-frame case, made with invertible wide frames, as I use them with the new-hive system. Those who are making a large number of cases, and wish to economize, will do well to use the T-case.

With the wide-frame case I prefer tin separators, and use none other, while with the T-case I use and prefer wood separators exclusively. (I am now talking about the use of cases with separators.) Without separators I would never use anything but the cases bearing my name, with wood partitions. Except that it is not well adapted to the use of separators, I consider it preferable to all other cases in every respect, and I firmly believe that it cannot be improved upon in any particular whatever. It has never been improved since I placed it before the public; and every suggestion of improvement made by myself or others, has turned out to be only a damage. I firmly believe that this will be the surplus case for years to come, for all those who do not use separators.

Dowagiac, 9 Mich.

Exchange.

Preserve Empty Hives and Combs.

WILL. M. KELLOGG.

Pile up your surplus hives and boxes in a dry place, with the entrances closed to keep out the mice and "mud daubers," and then take care of those empty combs. First, sort them over, and lay to one side all the poor ones, but save all the

straight worker comb, no matter if they are pretty black; they are just as good, if clean. If you have lumber to spare (or can get a large box), make a box of any size that will suit your convenience, and pile up the combs, not too tightly, in it till the box is full, standing the combs on each other, like bricks on end, just as they stood in the hive. Leave one corner open so you can place in an old tin can, in which place a few whittlings, or very rotten wood, sprinkled with a little kerosene; light this, and then pour on a couple of table-spoonfuls of sulphur, meanwhile holding your breath, or you will get a foretaste of purgatory not relishable.

You should place a board or two between the fire and the combs, to prevent the first combs getting too hot. Cover the box with boards, but leave a little ventilation both at the top and bottom or the sulphur will soon choke out. If the sulphur burns well, this will kill every moth-worm in the combs, but mind that it does not touch the eggs; give them a week to hatch, then fumigate again, and to be sure you have them all, give the combs a third dose. Those combs containing pollen you will find infested the worse.

If you have no box, and cannot spare the lumber or the money, use the empty hives, placing one of those lath division-boards between the outside comb and the can of sulphur. After each fumigation close up every crack and cranny tight, so that no moth can get in to lay her eggs. Do not say, "I guess it is all right;" know that it is.

Keep the moth at bay till freezing cold weather comes, and it will take care of the combs most effectually if left where they will freeze hard. But look sharp for next spring, for moths will winter through in other places, and be on the watch for empty combs. "Eternal vigilance is the price of" combs.

Now, see those old combs that have been discarded, thrown into a pile behind the shed; that will never do, that is like fencing out the old hog, and leaving a hole for the pigs to get into the garden. Just gather them up (the combs, not the pigs), hunt around the premises for all the little scraps of comb that can be found, so as to have all done in one job.

THE MAKING OF WAX.

If you have no wax-extractor, borrow the wife's boiler; pour in a couple of pailfuls of water, and place on the stove. Then put in the combs till the boiler is full, and it will soon melt down, so that you can put in more; keep punching and stirring it till you are sure that it is all melted, then take it from the fire.

Take a piece of fine wire-cloth or mosquito-bar, and push it down on the melted mass, letting the edges hang over the boiler. Now you can dip out the wax with a small dipper, through the wire-cloth which strains out the coarse dross, into a wet or greased pan. You can get one or two panfuls of clear wax, then use pans of cold water, so as to cool the wax

as soon as dipped off, and cause it to float. You will need to move the dipping spot all around the inside of the boiler to get all of the wax. The fine dross will gather on the bottom of the cakes, and can be scraped off.

If you want the cakes to cool without cracking, place them in a rather warm room, where there is little jar, and cover the pans with a board. The wax being made, now clean off the boiler and the pans, or woe unto you when the next wash-day comes. There will be a little wax sticking to the tin, and the best and surest way I know (yes, I tried kerosene), is to wash it off with a wet rag, sand, and lots of elbow-grease. But those nice cakes of wax will pay for all the trouble, and if the good wife scolds about a few spots of wax on her clean floor, just give her one of the biggest cakes for "pin-money."

Oquawka, o Ills.

Essex Record.

Ancient and Modern Honey.

A. B. WEED.

Honey is one of the oldest luxuries. We find it mentioned as early as 1707 B. C., when we read in Genesis 43, 11, that it is classed with the "best fruits of the land." It always seems to have been highly esteemed and regarded as a luxury. In the Bible it is used as a symbol of the agricultural wealth of a country; the expression, "a land flowing with milk and honey," is used to indicate an exceedingly desirable country. The expression is well considered, as the amount of honey and the variety of kinds gathered, is indicative of the flora of a country. Honey is gathered from all sources. Nature's cornucopia is tributary to the bee-hive. Honey is the pure nectar of plants; it is not altered in any way by the bees, except that they ripen it by evaporating the water from it, as the maple-sugar maker does the sap.

Until modern times, honey seems to have been regarded much as a special gift of nature, and but slightly consequent upon man's efforts to obtain it, further than the robbing of the bees. This is probably accounted for by the fact that bees were commonly regarded with fear, which amounted in some people to terror; and until the invention of modern hives and aparian implements, there has been no way of controlling bees or obtaining their honey in a marketable state. Now that bee-keeping has become systematized, and has taken its place among other active pursuits, one of the first things that the honey-producer finds necessary, is to prepare his wares for the market in attractive style.

Honey, years ago, was obtainable only in large, rough boxes containing large amounts; the price has also been very high. Now that the demands of the market are studied, we find it offered in packages of convenient size, and of such attractive appearance that it readily finds its way to the table. Its present price puts it

within the reach of all, and when its healthfulness is considered, it is seen to be the cheapest sweet known.

Honey should be kept in the dark, and in a temperature not lower than 70°; this is its condition in the hive. If it is exposed to cold and light, it will crystallize or candy. Many people, seeing it in this state, and not knowing the cause, believe that they have discovered sugar in it; on the contrary, this candying is trustworthy evidence of purity. If it is warmed—not heated—it resumes its original appearance.

If buyers insist on having an article that is not affected by circumstances, they will probably get it; but it will not be pure honey. Dealers who have it for sale should understand its peculiarities. Honey is one of the purest sweets used, and when its healthfulness is considered, one of the cheapest.

Detroit, Mich.

The Bees of Mexico.

It is always interesting and profitable to the thoroughly earnest apicultural student, to learn all that is known about the various races of bees, and especially concerning the bees of the different parts of the particular continent upon which one lives. Hence, we believe that the following article from the *British Bee Journal*, regarding the bees of our sister republic, Mexico, will be read with no little interest, and will contribute somewhat to the ever-increasing fund of knowledge already possessed about these wonderful little insects—the treasurers of that sweetest of all sweets—pure honey. The article is as follows:

There is not so much known about the different bees in the American Continent as might be expected. In these days, when there is a great tendency to obtain everything new and novel, and when there is such a great desire to introduce new races, it cannot be unprofitable to glean what information we can of the numerous varieties.

By the Mexican bee many have thought that there is only one variety, "the stingless bee;" but besides this we are assured there are many other kinds domesticated in that country. We doubt but that many of the species which are said to be without stings do in fact possess that organ, though often a feeble one, and are not readily provoked to use it. Great attention is paid to the Mexican bees by the natives, not so much on account of their honey, although remarkably rich and delicate, as for the sale of the wax. In Yucatan there are colonies of them domesticated, consisting of five or six hundred.

Hernandez describes several kinds of the insect in Mexico—one resembling

ling the European, and which produces a honey like our own. It is domesticated by the Indians, who lodge the swarms, he says, in the hollows of trees. A second species is noticed by the same author as smaller than ours, so much as to resemble smaller "winged ants," and as without stings. They build their nests, which are composed of several layers, in the rocks, and also suspend them on trees. Their honey is dark-colored and high-flavored. The cells are of smaller dimensions than those of the domestic bee; and it is probable, though not so stated, contain only brood; the honey being found in small cups. The larvæ, it appears, was esteemed a delicacy, for the historian tells us that when roasted and seasoned with salt, they have the taste and flavor of sweet almonds. This species collect their honey and live much in the same way with the honey-bees of Europe. Other small stingless bees are mentioned, which establish themselves underground in nests of a globular shape, but of very coarse workmanship; their honey, too, is inferior, and is never used but in default of better.

In domesticating their bees, the Mexicans lodge them in hives formed of short logs of wood, from 2 to 3 feet long, hollowed out about 5 inches in diameter, having the ends filled with clay, and a hole for the entrance bored on one side, about half-way between the ends. They are suspended in a horizontal position from the branches of trees.

The interior of a hive presents, like that of a humble-bee, a confused and irregular appearance. The combs, which have but one series of cells, are placed, some in a vertical position, and others horizontal. They are grouped together in an oval mass, and occupy nearly half of the internal space, while the other half is stored with the honey cups. The honey, as has been stated, is deposited in small globular bags, hung around the sides of the hives, or placed at the bottom; some of these receptacles are more than 1½ inches in diameter; and in many instances are so connected together that, as in the case of cells of common honey-comb, one side serves for two cups, thus combining economy and strength. And these magazines of honey being altogether apart from the brood combs, and in no ways connected with them, great facility is afforded in depriving the bees of their stores. The honey is thin in consistency, but of a very agreeable flavor, and gives out a rich, aromatic perfume. The wax is coarse, and of a brownish yellow; propolis does not appear to be used.

The Mexican bee is smaller by one-fifth than the European. Many of the species to which have been given the denomination of *Melipona*, or *Trigona*, are described as having no stings, or at least so feeble a weapon as to produce no sensible injury; and from this circumstance they are known in the Spanish colonies by the name of *Angelitos*, or little angels. The population of a hive is generally under a thousand.

A glance at the habits of some of the many varieties cannot fail to be of great interest, although the introduction into our apiaries of the so-called "stingless bee" might be the reverse of an improvement. We have noticed that the honey in Mexico obtained from these bees was thin in consistency, and this in a country where the bee-flora is almost perfect; what could we expect on these shores? perhaps the honey would not keep, and soon turn sour. The fact of the Mexican bee storing its honey in large cells, or cups, and always away from the brood—what a revolution in apiculture its introduction would cause!

Ohio Poultry Journal.

The Fruit and Honey Crops.

J. P. JOHNSON.

The honey crop this year is a failure throughout the United States, except California. There are a great many colonies of bees that will starve before the first of January if not fed, and probably two-thirds of all the bees east of the Rocky Mountains will have to be fed before spring, or they will starve to death. But this should not discourage the bee-keeper, as there are failures in all kinds of business. The farmer fails every seven or eight years in raising a wheat crop, and this year he has failed to a great extent in raising a corn crop. Still he is not discouraged, but goes at it with renewed energy the next year, as if his crops had all been a grand success.

In bee-keeping there will be dry seasons that will keep the bees from accumulating any surplus honey, and there will be winters that all the bees will die except those in the hands of the careful and experienced apiarist. Still this should not keep the lovers of honey—the purest and healthiest of sweets—from keeping bees. There may be years before there is another such a season as this one.

We have been keeping bees for years, and this is the first year that we did not get honey enough to supply our table. Still, we are not discouraged; next year will probably be one of the best honey seasons we have had for years, as one extreme brings on another. It is the opinion of a great number of scientific men who have made it their study, that if it were not for the bees the fruit-crop would be a failure, as the bees assist in distributing the pollen while the fruit is in bloom. Last spring, during the time the fruit was in bloom, it was windy, wet, and cold; so much so that the bees could not fly out. The result was, there was but little fruit of any kind. Horticulturists say that this was caused by the unfertilization of the bloom; and that the bees are of great use in this respect. So it seems that if we get but little honey, it will pay to keep bees, as the fruit-crop is worth more to the country than the honey-crop.

Honey is scarce and high in price, and those that have honey to sell will hold it for the high price they can get.

Take care of the bees; examine them occasionally, to see if they have plenty of stores to winter on, and if not, feed them. Granulated sugar is the best feed, and the only feed that is safe to winter on. Of course honey is better than anything else, but it does not pay the bee-keeper to feed honey when sugar will do as well. Feed all light colonies of bees, in October, till they have from 20 to 40 lbs. of stores.

Take good care of your bees, and we are satisfied that you will never regret it. If they did not gather much honey this year, there is no knowing what the future has in store for you.

Piqua, O.

Local Convention Directory.

1887. Time and place of Meeting.
- Oct. 26.—Wabash County, at Wabash, Ind. F. S. Comstock, Sec., North Manchester, Ind.
 - Oct. 26, 27.—Pan-Handle, at Wheeling, W. Va. W. L. Kinsey, Sec., Blaine, O.
 - Oct. 28.—Darke County, at Arcanum, O. J. A. Roe, Sec., Union City, Ind.
 - Nov. 16.—Western, at Kansas City, Mo. J. A. Nelson, Sec., Muncie, Kans.
 - Nov. 16-18.—North American, at Chicago, Ill. W. Z. Hutchinson, Sec., Rogersville, Mich.
 - Dec. 7-9.—Michigan State, at East Saginaw, Mich. H. D. Cutting, Sec., Clinton, Mich.
 - 1888.
 - Jan. 20.—Haldimand, at Cayuga, Ontario. E. C. Campbell, Sec., Cayuga, Ont.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Superiority of the Italians.—Burke Salkeld, Babylon, O. Ills., on Oct. 10, 1887, writes:

This has been a very poor season for honey, and has proven the superiority of Italian bees. My Italians gathered 25 pounds per colony, while the blacks, fully as strong, did nothing but try to rob.

Report for 1887.—S. P. J. England, (38—38), Fancy Prairie, O. Ills., on Oct. 11, 1887, says:

I have secured 1,600 pounds of extracted honey this year, and it is all sold. Last year my bees averaged 200 pounds per colony. Old fogy bee-keepers are very "blue," and a great many of their bees have already perished.

Union Convention at Chicago.—The North American Bee-Keepers' Society and the Northwestern Bee-Keepers' Society will meet in joint convention at the Commercial Hotel, cor. Lake and Dearborn Streets, in Chicago, Ills., on Wednesday, Thursday and Friday, Nov. 16, 17 and 18, 1887. Arrangements have been made with the Hotel, for back room, one bed, two persons, \$1.75 per day, each; front room, \$2.00 per day each person. This date occurs during the second week of the Fat Stock Show, when excursion rates will be very low. W. Z. HUTCHINSON, Sec.



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ALFRED H. NEWMAN,
 BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

We will Present Webster's Dictionary (pocket edition), and send it by mail, postpaid, for two subscribers with \$2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us three subscriptions—with \$3.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

A Valuable Book Given Away.—We have made arrangements by which we can supply the AMERICAN BEE JOURNAL and the New York World—both weekly—for one year, for \$2.10, and present the subscriber with one of these books, bound in Leatherette Free Calif:

HISTORY OF THE UNITED STATES—from 432 to 1887.—320 pages.—Price, \$2.00.

HISTORY OF ENGLAND—from before the Christian era to 1887.—Price, \$2.00.

EVERYBODY'S BOOK—a treasury of useful knowledge.—410 pages.—Price, \$2.00.

The extra 10 cents is for postage on the book, which must be selected by the subscriber at the time of sending the subscription, and cannot be afterwards exchanged.

The book selected will be mailed in a cardboard case, at the subscriber's risk; if lost it cannot be replaced. Be sure to write your name, post-office, county and State plainly, and then the risk of loss is very small. The subscriptions can commence at any time.

Remember, the amount is \$2.10 for both papers, and the Book and postage.

Sweet Clover, (*Melilotus alba*), furnishes the most reliable crop of honey from July until frost, and at the same time it furnishes the most delicious honey, light in color, and thick in body. It may be sown in waste places, fence corners, or on the roadside. Sow two years running, on the same land, and the honey crop will be without intermission. Money invested in Sweet Clover Seed will prove a good investment. The Seed may be obtained at this office at the following prices: \$6.00 per bushel (60 lbs.); \$1.75 per peck, or 20 cents per pound.

Simmins' Non-Swarming System.—We have received another shipment of these books, and have made such favorable terms, that we will now club them with the BEE JOURNAL for one year, both postpaid, for \$1.25. We can supply all orders by **return mail**. The subscription to the BEE JOURNAL can be for next year, this year, or may begin anew at any time.

Enameled Cloth for covering frames, price per yard, 45 inches wide, 20 cents; if a whole piece of 12 yards is taken, \$2.25; 10 pieces, \$20.00; if ordered by mail, send 15 cents per yard extra for postage.

Preserve your Papers for reference. If you have no **BINDER** we will mail you one for 60 cents, or you can have one **FREE** if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

Sample Copies of the BEE JOURNAL will be sent **FREE** upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office or we will send them all to the agent.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	Club
The American Bee Journal	1 00..	
and Gleanings in Bee-Culture	2 00..	1 75
Bee-Keepers' Magazine	1 25..	1 20
Bee-Keepers' Guide	1 50..	1 40
The Apiculturist	2 00..	1 75
Canadian Bee Journal	2 00..	1 75
Rays of Light	1 50..	1 35
The 7 above-named papers	5 25..	4 50
Cook's Manual	2 25..	2 00
Bees and Honey (Newman)	2 00..	1 75
Binder for Am. Bee Journal	1 00..	1 50
Dzierzon's Bee-Book (cloth)	3 00..	2 00
Root's A B C of Bee-Culture	2 25..	2 10
Farmer's Account Book	4 00..	2 00
Western World Guide	1 50..	1 30
Heddon's book, "Success"	1 50..	1 40
A Year Among the Bees	1 75..	1 50
Convention Hand-Book	1 50..	1 30
Weekly Inter-Ocean	2 00..	1 75

One yearly subscription for the AMERICAN BEE JOURNAL must be ordered with each paper or book, in order to take advantage of the prices named in the last column.

System and Success.

All who intend to be systematic in their work in the apiary, should get a copy of the **Apiary Register** and commence to use it. The prices are reduced, as follows:

For 50 colonies (120 pages)	\$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Home Market for Honey.

To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, \$2.50. Five hundred will be sent postpaid for \$10.00; or 1,000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them)

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell lots of it.

We have a few Sets of the BEE JOURNAL for the present year, and can fill orders until further notice, for all the numbers from the first of last January. New subscribers desiring these **back numbers**, will please to state it plainly, or they will not be sent.

We have a large quantity of **CHOICE WHITE EXTRACTED HONEY**, in kegs holding from 200 lbs. to 225 lbs. each, which we will deliver on board the cars at 10 cents per lb. Orders solicited.

Honey and Beeswax Market.

CHICAGO.

HONEY.—We quote: White clover 1-lb. sections 20¢; 2-lbs., 18¢; 10¢; dark 1-lb. 17¢; 2-lbs., 16¢. Receipts continue light, and prices tend higher.
Oct. 14.

S. T. FISH & CO., 189 S. Water St.

CHICAGO.

HONEY.—We quote: White comb in 1-lb. sections brings 18¢; according to its appearance. Very little call for dark or buckwheat comb honey. Extracted, 7¢.
Oct. 1.

R. A. BURNETT,
161 South Water St.

DETROIT.

HONEY.—Best white comb brings 16¢.
BEE SWAX.—23¢.
Sept. 20.

M. H. HUNT, Bell Branch, Mich.

CLEVELAND.

HONEY.—Best white 1-lb. sell readily at 18¢; 2-lbs., 16¢. White clover extracted, 8¢.
BEE SWAX.—25¢.
Oct. 5.

A. C. KENDEL, 115 Ontario St.

BOSTON.

HONEY.—New crop, 1-lb. sections, 18¢; 2-lb. sections, 17¢. Extracted, 8¢.
BEE SWAX.—25¢.
Sept. 16.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white, scarce at 7¢; amber to light amber, 5¢; 5¢; Comb, amber to white 2-lbs., 15¢; 1-lb., 15¢. Demand is good, but arrivals and supplies are very small.
BEE SWAX.—23¢.
Oct. 4.

SCHACHT & LEMCKE, 122-124 Davis St.

SAN FRANCISCO.

HONEY.—We quote: White to extra white comb 10¢; 10¢; amber, 10¢; 10¢. Extracted, light amber, 6¢; 6¢; amber, dark and candied, 5¢; 5¢; extra white would bring 7¢, but none is in the market.
BEE SWAX.—19¢.
Oct. 3.

O. B. SMITH & CO., 423 Front St.

MILWAUKEE.

HONEY.—Choice 1-lb., 17¢; 2-lb., 15¢. White extracted in kegs and barrels, 7¢; 7¢; and in tin cans, 8¢; dark in kegs and barrels, 6¢; 6¢; in tin cans, 6¢; 6¢. Demand good; supply limited.
BEE SWAX.—25¢.
Aug. 26.

A. V. BISHOP, 142 W. Water St.

NEW YORK.

HONEY.—We quote: Fancy white in 1-lb. sections, 17¢; 17¢; the same in 2-lb., 15¢; 15¢; buckwheat 1-lb., 12¢; 12¢; 2-lb., 10¢; 10¢. Off grades 10¢; per lb. less. White extracted, 8¢; 8¢; buckwheat, 5¢; 5¢; Southern, per gallon, 60¢; 60¢. Market seems to be unsettled.
BEE SWAX.—23¢.
Sept. 20.

MCALL & MILDRETH BROS.,
28 & 30 W. Broadway, near Duane St.

KANSAS CITY.

HONEY.—We quote new crop: Choice white 2-lb. sections, 16¢; 16¢; dark 2-lb., 12¢; 12¢; choice white 1-lb., 18¢; 18¢; dark 1-lb., 14¢; 14¢. White extracted, 8¢; 8¢; dark, 5¢; 5¢. Demand good, but light supply.
BEE SWAX.—21¢.
Sept. 21.

HAMBLIN & BEARSS, 514 Walnut St.

KANSAS CITY.

HONEY.—We quote: Choice white 1-lb., 20¢; 20¢; 15¢; 15¢; choice white 2-lb., 18¢; 18¢; dark, 14¢. Extracted, 8¢; 8¢; California—white 1-lb., 18¢; 18¢; dark, 15¢; white 2-lb., 16¢; 16¢; dark, 14¢; 14¢. White extracted, 8¢; 8¢; amber, 8¢. Supply fair.
BEE SWAX.—No. 1, 22¢; No. 2, 18¢.
Oct. 6.

CLEMONS, CLOON & CO., cor 4th & Walnut

ST. LOUIS.

HONEY.—Choice comb, 13¢; 14¢; latter price for choice white clover in good condition. Strained, in barrels, 4¢; 4¢. Extra fancy, of bright color and in No. 1 packages, 1¢-cent advance on above. Extracted, in bbls., 4¢; 4¢; in cans, 3¢; 3¢. Short crop indicates further advance in prices.
BEE SWAX.—20¢; for prime.
Sept. 22.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—We quote extracted at 3¢; 7¢. per lb. Demand is good for clover honey in square glass jars from the jobbing trade. No new comb honey in this market, but we would think that choice white would bring 18¢; 20¢. in a jobbing way.
BEE SWAX.—Demand good—2¢; 22¢. per lb. for good to choice yellow, on arrival.
Sept. 20.

C. F. MUTH & SON, Freeman & Central Av.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, 18¢; 18¢; fancy 1-lb., glassed or unglassed, 17¢; 17¢; fancy 2-pounds, glassed, 15¢; 15¢. Lower grades 12¢; per lb. less. Buckwheat 1-lb., 11¢; 11¢; 2-lb., 10¢; same glassed or unglassed, 10¢; 10¢; 2-lb., glassed, 10¢. Extracted, white, 8¢; 8¢; dark, 6¢; 6¢. Demand good, market firm.
Oct. 13.

F. G. STROHMEYER & CO., 122 Water St

PHILADELPHIA.

HONEY.—Fancy white 1-lb., 19¢; 20¢; fair 1-lb., 18¢; fancy 1½-lb., 18¢. No sale yet for dark. Extracted, California, 8¢; Cuba strained, 8¢; 70¢. per gallon.
BEE SWAX.—24¢.
Oct. 10.

ARTHUR TODD, 2122 N. Front St.

The Western Bee-Keepers' Society will hold a meeting on Wednesday, Nov. 16, 1887, at the residence of Mr. Peter Otto, corner of Park and 25th Streets, Kansas City, Mo. Take the 18th Street horse-cars at 9th & Main Sts. for 18th & Brooklyn Sts., thence walk south to 25th St., and thence east one block to the house. We are sure of a cordial welcome from Mr. and Mrs. Otto, and expect a good meeting.
JAS. A. NELSON, Sec.

Wanted.—The following numbers of the AMERICAN BEE JOURNAL:

For 1882, Numbers 2, 4, 8, 9, 13, 20, 24, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 40, 42, 43, 45, 47, 48 and 51.

For 1884, Numbers 1, 3, 5, 9, 13, 16, 17, 18, 20, 21, 22, 23, 24, 25, 27, 28, 33, 38, 41, 46, 47, 48, 50, 51 and 52.

Any one having them to spare, can write to us, and we will make an offer for them. Do not send them without correspondence, as we shall take only one set of the numbers to complete Volumes for one of our correspondents.

We are sometimes asked who our authorized agents are. Every subscriber is such an agent; we have no others, and we greatly desire that each one would at least send in the name of one new subscriber with his own renewal for 1888. The next few weeks is the time to do this. We hope every subscriber will do his or her best to double our list of subscribers.

Queens.—We can mail a Tested Italian Queen (bred for the best results as well as for beauty) for \$2.00; Untested Queens, \$1 each, or \$9.00 per dozen. Orders solicited.

Our New Book List on the second page is the place from which to select the book you want. We have a large stock of every book there named, and can fill all orders on the day they are received.

We pay 20 cents per pound, delivered here, for good Yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

Advertisements.

COMB HONEY WANTED.

WE should be pleased to correspond with any one having COMB HONEY For Sale. We sell on Commission at highest market prices. Address,

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In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, we have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the \$16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the \$8.00 Extractors, all the different styles have strainers over the can leading to the honey gate, and movable sides in the Comb Baskets. The \$8.00 and \$10.00 Extractors have no covers.

For 2 American frames, 13x13 inches.....	\$8 00
For 2 Langstroth " 10x18 "	8 00
For 3 " " 10x18 "	10 00
For 4 " " 10x18 "	14 00
For 2 frames of any size, 13x20 "	12 00
For 3 " " 13x20 "	15 00
For 4 " " 13x20 "	18 00

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